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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,514	12/05/2003	Xing Ping Lin	TRW(TE)6854	2375

7590 12/13/2005
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P.
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EXAMINER

LIEU, JULIE BICHNGOC

ART UNIT PAPER NUMBER

2636

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/729,514		LIN, XING PING	
	Examiner		Art Unit	
	Julie Lieu		2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,11,13 and 14 is/are rejected.
- 7) ☒ Claim(s) 2-4,6-10,12 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/5/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanafusa et al. (US Patent 6,630,815) in view of Hanada (US 2002/0075397).

Claim 1:

Hanafusa discloses a circuit comprising:

- a. A battery for supplying electrical energy and

- b. A current control device 50 for that is responsive to temperature for adjusting a current draw from the battery to insure a predetermined minimum output voltage from the battery.

The reference fails to clearly disclose the battery having an equivalent series resistance that varies inversely with temperature. However, battery having an equivalent series resistance is conventional in the art as evidenced in Hanada. Therefore, one skilled in the art would have readily recognized that the battery used in Hanafusa has an equivalent series resistance since it is conventional in a battery.

Claims 5 and 11:

Hanafusa discloses a circuit comprising:

- c. A battery for supplying electrical energy and
- d. A current control device 50 including a resistance varying device, which is a thermistor, PTC 55, being responsive to temperature for reducing current draw from the battery to insure a predetermined minimum output voltage from the battery.

The reference fails to clearly disclose the battery having an equivalent series resistance that varies inversely with temperature. However, battery having an equivalent series resistance is conventional in the art as evidenced in Hanada. Therefore, one skilled in the art would have readily recognized that the battery used in Hanafusa has an equivalent series resistance since it is conventional in a battery. Hanafusa fails to disclose a sensor portion that is operative to sense a parameter of the tire when supplied with a voltage of at least a predetermined minimum value. Nonetheless, one skilled in the art would have readily recognized using the battery current

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control circuit in Hanafusa in which the battery is used to supply energy to a sensor of a tire as desired because the system in Hanafusa would provide a reliable sensing system.

Claim 13:

The rejection of claim 13 recites the rejection of claim 1, except it is method claim.

Claim 14:

The method in Hanafusa reduces a current drawn from the battery includes the step of increasing resistance in series with the battery since the PTC increases when temperature increases.

3. Claims 2-4, 6-10, 12, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on MaxiFlex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Julie Lieu', with a stylized, flowing script.

Julie Lieu
Primary Examiner
Art Unit 2636

Dec. 06, 05